

# **City of Wichita**

## **BRACING OF WALL SECTIONS IN RESIDENTIAL HOMES UP TO 12 FOOT VERTICAL WALLS**

ADOPTED 2007



CITY OF  
WICHITA

**Office of Central Inspection**

### **Bracing of Wall sections in Residential Homes**

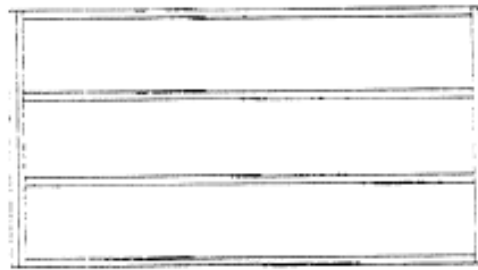
The following standards are found to be acceptable for construction of residential homes building in Wichita and Sedgwick County. Application of these standards are deemed appropriate and acceptable in consideration of the structure as a "whole house" system and are acceptable in recognition of the fact that for the past 20-plus years (at least) in the Wichita and surrounding areas there have not been any documented cases of failure due to lack of braced wall strength given the application of these standards used during this time period by area builders and subcontractors. Failures that have occurred and they are not that great in number, have been due to failure of vehicle access doors when closed and exposed to winds in excess of what they are rated for.

The standards are as follows:

1. Single bottom and double top plates with a maximum height of 12' (2x4 or 2x6).
2. A beginning and end stud with other studs at 16" on center.
3. Attach structural sheathing nailed at 6" on center on all edges and 12" on center in field with 8d or 7/16" by 1 1/2" crown staples.
4. Braced wall section shall be a minimum of 16" in width.
5. Offsets from a braced wall line cannot be more than 4' and, combined offsets cannot total more than 8'.

6. Braced wall panels of walls less than 25' shall contain a minimum of 32" of braced wall panels within 12'6" of the ends of the wall. One panel of 32" or two panels of 16" will be acceptable. (See pg. 4)
7. Braced wall panels of walls 25' or more shall be a minimum of 48" with another braced wall panel of 16" for each additional 8'4" of wall within 12'6" of the end of the wall.
8. The parallel wall section of a room projecting from the main body of the structure does not have to contain a braced wall panel if less than 14' in length and must not have a wall height greater than wall heights of the main body of the structure. The perpendicular wall sections of the projecting room shall not be greater than the parallel wall section in length. However, the parallel sections that contain window or door openings must be boxed with structural sheeting.
9. All openings to the house including the vehicular access doors shall be designed to withstand a minimum of 90 mph wind forces.
10. If the house is completely boxed in structural sheeting, the requirements for wall bracing have been met for up to 12' in wall height. No brace wall inspection is required.

# BRACED WALL PANEL:

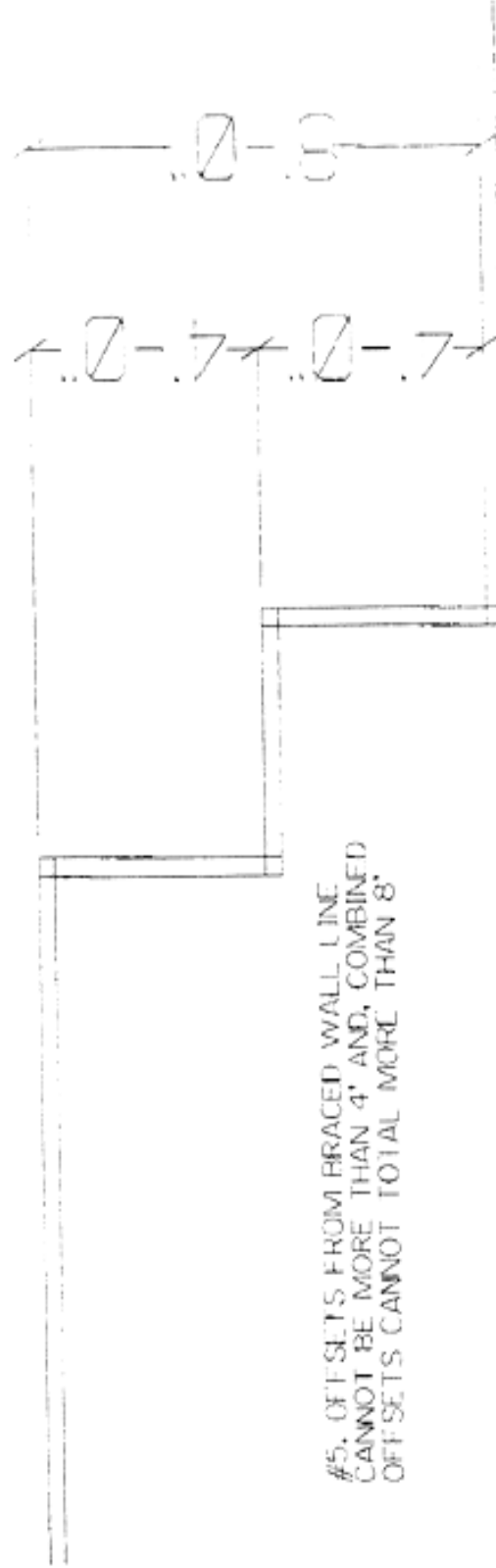


#1. SINGLE BOTTOM AND DOUBLE TOP PLATES WITH A MAXIMUM HEIGHT OF 12". (2x4 or 2x6)

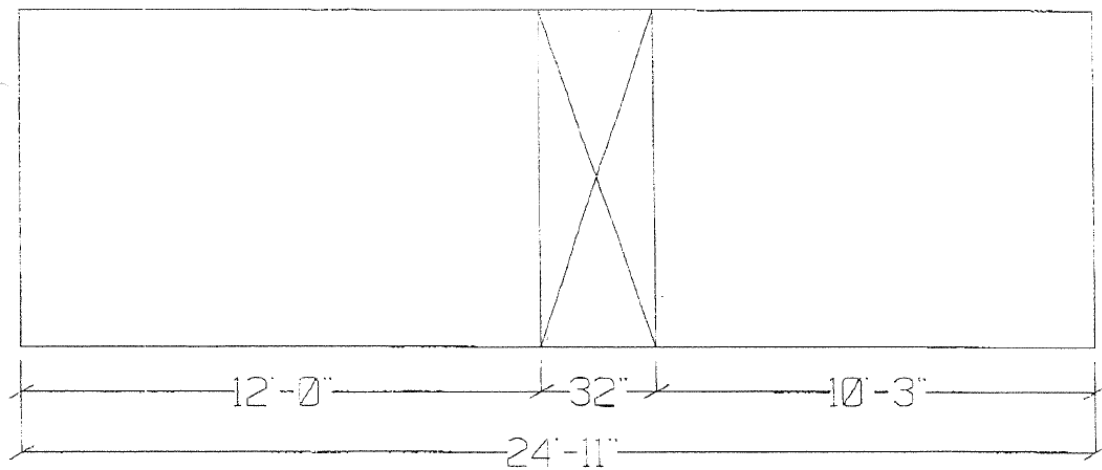
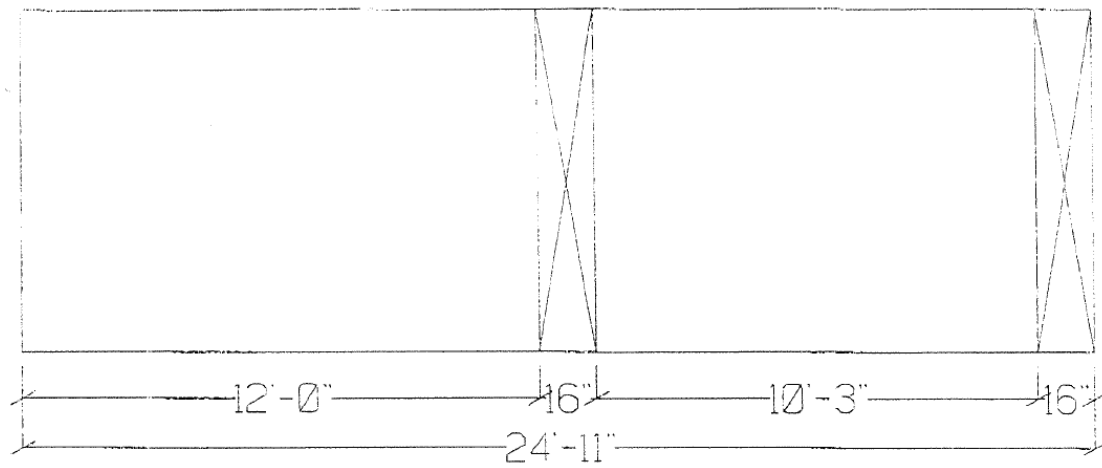
#2. A BEGINNING AND END STUD WITH OTHERS STUDS 16" ON CENTER

#3. ATTACH STRUCTURAL SHEATHING NAILED AT 6" ON CENTER ON ALL EDGES AND 12" ON CENTER IN FIELD 8d OR STAPLED WITH 1 1/2" BY 1/16" CROWN STAPLES.

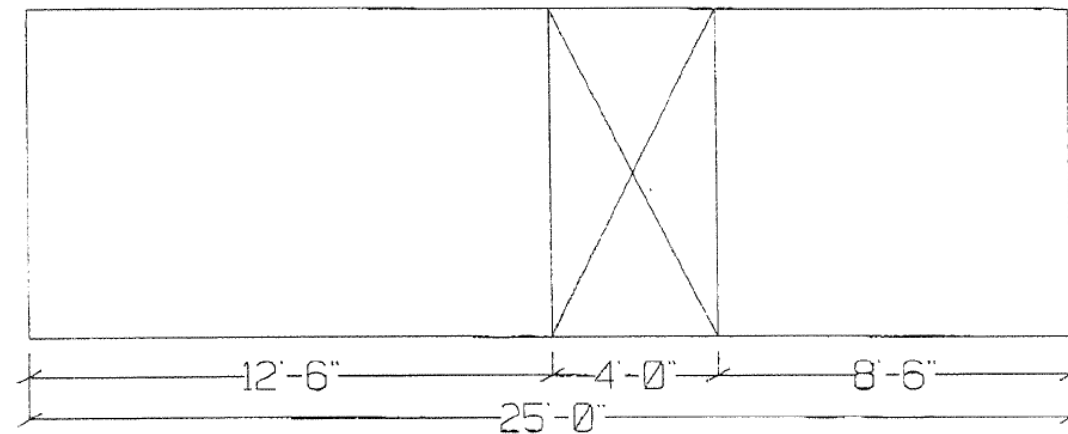
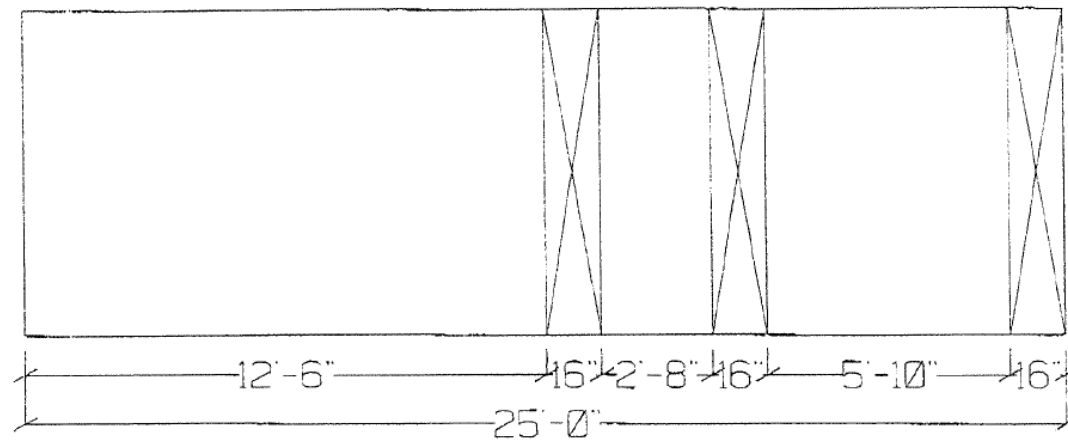
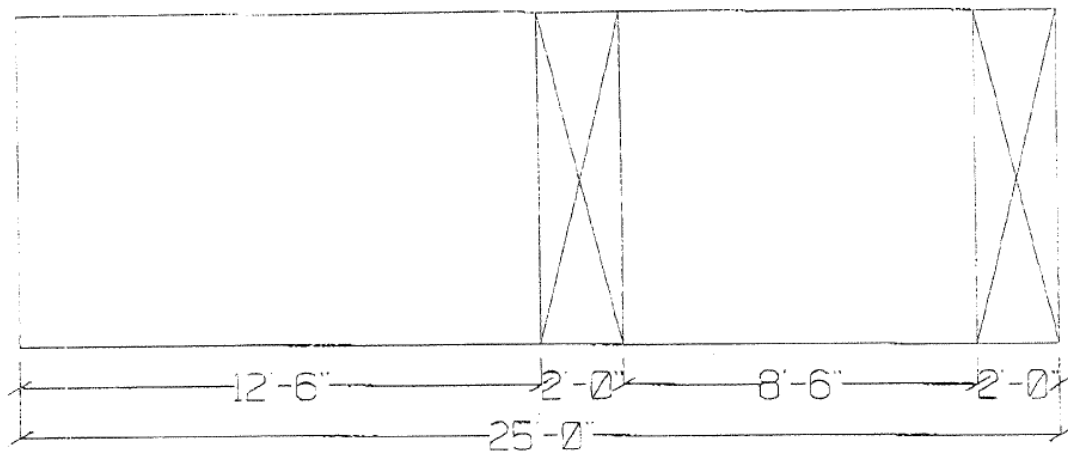
#4. BRACED WALL SECTIONS SHALL BE A MINIMUM OF 16" IN WIDTH



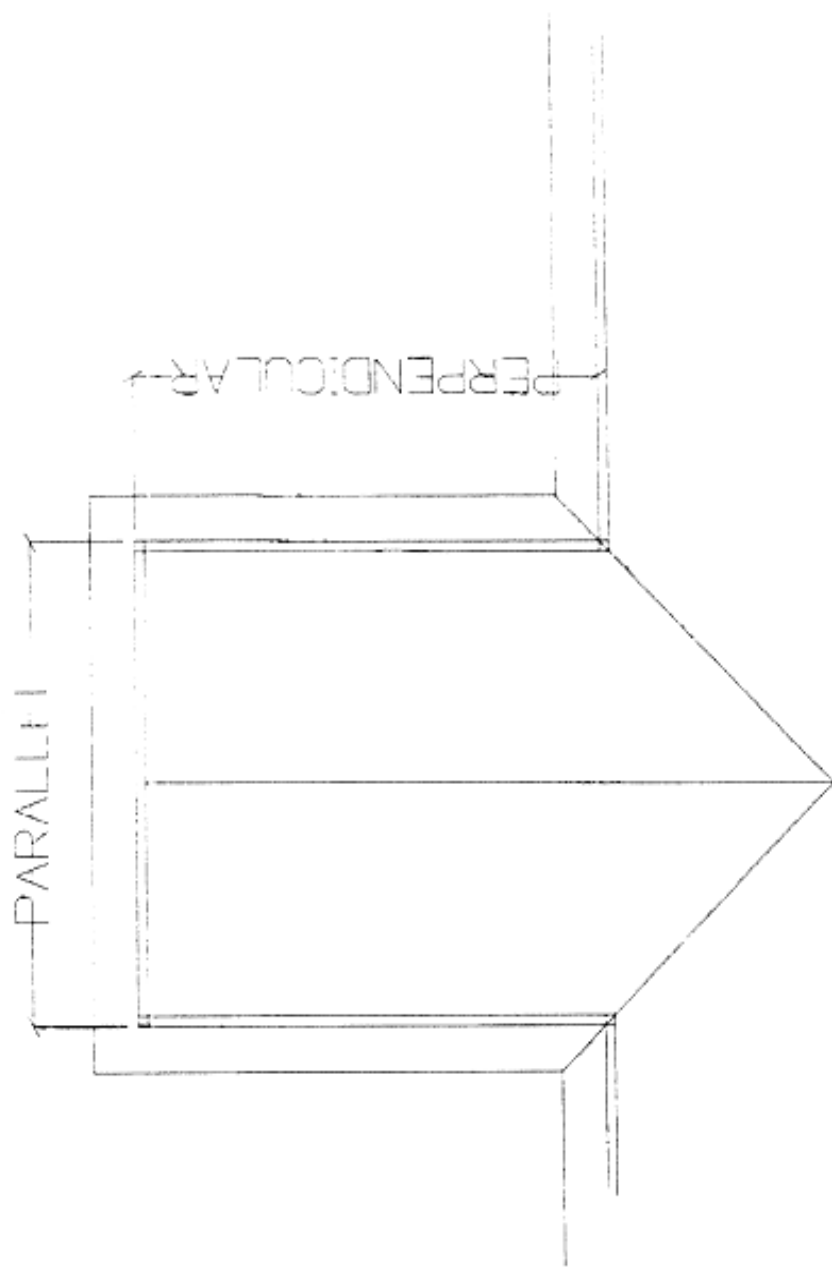
#5. OFFSETS FROM BRACED WALL LINE CANNOT BE MORE THAN 4" AND, COMBINED OFFSETS CANNOT TOTAL MORE THAN 8"



#6. BRACED WALL PANELS OF WALLS LESS THAN 25' SHALL CONTAIN A MINIMUM OF 32" BRACE WALL PANELS WITHIN 12'6" OF THE ENDS OF THE WALL. ONE PANEL 32" OR TWO PANELS OF 16" WILL BE ACCEPTABLE



#7. BRACED WALL PANELS OF WALLS 25' OR MORE SHALL BE A MINIMUM OF 48" WITH ANOTHER BRACED WALL PANEL OF 16" FOR EACH ADDITIONAL 8'4" OF WALL WITHIN 12'6" OF ENDS OF THE WALL.



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#8. THE PARALLEL WALL SECTION OF A ROOM PROJECTING FROM THE MAIN BODY OF THE STRUCTURE DOES NOT HAVE TO CONTAIN A BRACED WALL PANEL IF LESS THAN 14' IN LENGTH AND MUST NOT HAVE A WALL HEIGHT GREATER THAN WALL HEIGHT OF THE MAIN BODY OF THE STRUCTURE. THE PERPENDICULAR WALL SECTIONS OF THE PROJECTING ROOM SHALL NOT BE GREATER THAN THE PARALLEL WALL SECTION IN LENGTH. HOWEVER, THE PARALLEL SECTION THAT MAY CONTAIN WINDOWS OR DOOR OPENINGS MUST BE BOXED WITH STRUCTURAL SHEETING.